



# Discussion Paper BRIEFS

Food Consumption and Nutrition Division of the International Food Policy Research Institute

*Discussion Paper 102*

## School Subsidies for the Poor: Evaluating a Mexican Strategy for Reducing Poverty

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Poverty alleviation programs have taken a variety of forms. Social welfare programs provide transfers in cash and kind to people with incomes and assets below a specified level in most high-income countries. These conditional transfer programs have been shown to be likely to distort the allocation of private economic resources and thereby reduce the efficiency of the economy. In populations engaged in agriculture, poverty alleviation programs have often taken the form of setting prices for farm outputs or subsidizing farm inputs. In contrast to means-tested income supports in welfare programs, agricultural price supports are generally not specifically targeted to poor families, but only to a relatively poor occupation or industry. In neither the income supplement nor price-support program is there an expectation that beneficiaries will invest more in the acquisition of skills or the accumulation of capital to boost their future productivity and consumption, and thus diminish their dependence on transfers from the state. Indeed, one consequence of both of these types of programs is that they erode incentives to change the sector of employment, accumulate new types of productive job experience, or generally invest in human capital.

### ***About the PROGRESA Program***

The Programa Nacional de Educacion, Salud, y Alimentacion (PROGRESA) program in Mexico takes a different approach to poverty reduction by subsidizing the investment of poor families in their children's human capital. It provides means-tested transfers to poor rural mothers whose children are enrolled in grades 3-9. The program seeks to reduce the current level of poverty and to increase the schooling—and thereby future productivity—of children. The program started paying grants to eligible beneficiaries in September 1998, and by the start of 2000, the program had enlisted two million families, or about one-tenth of the Mexican population. The government implemented the program as a phased social experiment, collecting sufficient background and follow-up survey information to facilitate cost-benefit evaluations.

### ***Purpose of This Study***

One change in resource allocation expected from the PROGRESA program is an increase in the school enrollment of poor children. This paper estimates the enrollment impact of PROGRESA on randomly selected children from poor rural households that participated in the first phase of the program. The program impact is inferred from comparisons with poor children from randomly selected control communities that did not benefit from the first expansion of the program. Both the treatment and control populations were surveyed twice in the year before the program was announced and followed for two years after the program commenced, providing a total of five survey cycles for this study. There are about 200,000 people in 495 poor rural communities originally included in a background census in October 1997. Almost two-thirds of these communities were designated as program treatment areas in September 1998, and in these areas about two-thirds of the households were judged eligible for program benefits.

### ***Summary and Conclusions***

The level of enrollment rates in treatment localities is higher than in non-PROGRESA localities in the three survey rounds collected after the program began dispensing educational grants to poor mothers whose children were enrolled in grades 3-9 and attended school at least 85 percent of the time. This effect is statistically significant within each distinguished group of children who had completed grades 1-6 in the previous year, and these differences are larger for girls than boys. (To

***“Subsidizing schooling among the rural poor may be a development strategy that deserves more attention...as it can both reduce entrenched poverty and promote long-term economic growth.”***

confirm the independence of the placement of the PROGRESA program from enrollments and the definition of eligibility, the regional differences in enrollment by the poor are also calculated before the program started and shown not to differ significantly from zero.) Difference in differences over time confirms a slightly smaller program impact on enrollment. The cumulative cohort effect of the program, based on the difference in differences estimator, is an increment of .66 years on the baseline level of 6.80 years of schooling recorded in the pre-program rounds of the surveys.

The PROGRESA program targets its educational subsidies to the very poor, even in geographically restricted, relatively immobile, poor rural communities. It is also shown that these targeted transfer payments have the effect of reducing the inequality in school enrollments within PROGRESA localities compared to non-PROGRESA localities, and they are statistically significant after grades 4-6. The pre-program inequality differences between PROGRESA and non-PROGRESA localities are not jointly statistically significant.

One way to assess whether a roughly two-thirds of a year increment in schooling is worth the cost of the program is to compare the expected program payments to the resulting expected increase in adult productivity of the students who would benefit from a permanently established PROGRESA program. If the current urban wage differentials approximate what program beneficiaries can expect to earn from their schooling in terms of future percentage increases in their wages, a rough estimate of the internal rate of return to the educational transfers provided by the program is 8 percent per year in real terms (adjusted for inflation). This would appear to be a reasonable rate of return if the program were designed only to foster human capital investments. But PROGRESA is clearly more than this, since it is channeled to the poor and operates to reduce current poverty and raise current consumption levels. For the majority of the poor rural families whose children would have attended school without the program's educational grants, the PROGRESA outlays are pure income transfers. But for the roughly 5 percent who are induced to enroll their child in school, they may experience a decrease in their children's supply of labor to work in the labor force or in household production. However, although there is such a child labor supply response associated with the family being eligible for PROGRESA educational grants, the magnitude of the response is modest and cannot eliminate the consumption gains of the

program to poor families. These data indicate important spillover effects in of nonbeneficiary house- in nutrition surveillance rates months after the program, there was no difference in mean changes in children in treatment and control rates group in not only the strong presence of but manifest themselves.

Other traditional poverty-reduction programs, such as income-support welfare systems or price-support agricultural programs, offer no empirical evidence or theoretical reason to expect that these programs encourage investments in human capital or promote a more efficient allocation of private or social resource. Indeed both of these common forms of poverty programs are related to major distortions in the allocation of the family's labor and other beneficiary resources. These distortions are minimized by the design of PROGRESA (to involve only "pure income effects").

Although it is not always a politically popular feature of a welfare program focused on poor areas, PROGRESA should help the children of poor Mexican farmers find a better place to work by encouraging them to invest in schooling, which, in turn, facilitates the migration of these young people to areas where wages and long-term career opportunities are more attractive. Thus, it should be expected that PROGRESA will encourage the interregional migration that is needed at the macro-economic level to ease the extreme poverty that has persisted for generations in the more remote rural parts of Central and Southern Mexico. Subsidizing schooling among the rural poor may be a development strategy that deserves more attention as a promising targeted policy in many parts of the world, as it can both reduce entrenched poverty and promote long-term economic growth.

**Keywords:** Mexico, education, human capital, poverty intervention

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